

Combined Sewer Outfall (CSO) Individual NJPDES Discharge Permits FAQs 2013

The Department is issuing draft NJPDES individual CSO permits to New Jersey's CSO communities.

1. Common Permit Information:

The individual permits address a total of 217 Combined Sewer Outfalls (CSOs); Bayonne (30); Camden City (28); CCMUA (1); East Newark (1); Elizabeth City (28); Fort Lee (2); Gloucester City (7); Hackensack City (2); Harrison Town (7); Jersey City (21); Kearny Town (5); NBMUA (10); Newark City (17); NHSA Adams (8); NHSA W NY (2); Paterson (24); Perth Amboy (16); Ridgefield Park (6); Town of Guttenberg (1); and Trenton (1). The Department will provide for a minimum 30 day public comment period. The Department may also schedule a non-adversarial public hearing if sufficient public interest exists. Notice of the public comment period and other relevant information will be included in the public notice which will be published in the DEP Bulletin and a local newspaper.

The Department will be issuing 25 CSO permits for the municipalities that collect and the sewage treatment plants that receive those flows. Since controlling CSO discharges requires a coordinated and comprehensive approach, these permits will be issued in nine groups based on the nine sewage treatment plants that receive those flows. All draft CSO permits are scheduled to be issued in calendar year 2013. The final permits are scheduled to be issued in 2014.

2. What is a CSO (combined sewer outfall)?

Many older, urban cities across America constructed combined sewer systems (CSS) that were designed decades ago to collect rainwater and snowmelt runoff, domestic sewage, and industrial wastewater in the same pipe. Combined sewer systems are no longer permitted in new communities, but many older cities continue to operate existing CSSs. Most of the time, the CSSs transport all wastewater to a sewage treatment plant, where it is treated and then discharged to a water body. However, during periods of rainfall or snowmelt, the wastewater volume in a CSS can exceed the hydraulic capacity of the sewer system or treatment plant. For this reason, CSSs were designed to overflow during these periods and discharge excess wastewater directly from the CSSs, through a combined sewer outfall (CSO) to nearby streams, rivers, instead of being transported to the sewage treatment plant (STP).

CSOs often contain high levels of suspended solids, pathogenic microorganisms, toxic pollutants, floatables, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants. CSOs can cause exceedances of water quality standards (WQS) which may pose risks to human health, threaten aquatic life and its habitat, and impair the use and enjoyment of the State's waterways.

Currently, CSOs serve to provide a hydraulic release for these CSS when they are over capacity. Without CSOs, this mix could back up into homes, businesses, and public streets. Through issuance and compliance with the CSO Individual NJPDES permits, communities will enhance their collection and treatment systems so that the use of CSOs will be reduced and/or eliminated.

3. How many CSOs are in N.J.? Where are they? Is NJ the only state with CSOs?

Combined sewer systems are remnants of the country's early infrastructure and are typically found in older communities across the United States. Combined sewer systems serve roughly 1,100 communities nationwide. Most communities with combined sewer systems (and therefore with CSOs) are located in the Northeast, Great Lakes regions and the Pacific Northwest.

For comparison purposes, the number of CSOs in NJ, NY and PA are listed below:

- **NJ has 217 CSOs** within 21 communities
- **NY has 937 CSOs** (www.dec.ny.gov/chemical/48595.html)
- **PA has 1,569 CSOs** within 152 communities
<http://jcc.legis.state.pa.us/resources/ftp/documents/reports/2001%20CSO%20Report.pdf>

4. What is the National CSO Policy?

Nationwide, the control of CSOs has proven to be extremely complex. This complexity stems partly from the difficulty in quantifying CSO impacts on receiving water quality and the site-specific variability in the volume, frequency, and characteristics of CSOs. In addition, the financial considerations for communities with CSOs can be significant. The U.S. Environmental Protection Agency (EPA) estimated the CSO abatement costs for the 1,100 national communities served by CSSs to be approximately \$41.2 billion in the May 1995 Combined Sewer Overflows - Guidance for Nine Minimum Controls. In 2008, New Jersey's CSO abatement costs were estimated at \$9.3 billion. See National Clean Watersheds Needs Survey, <http://water.epa.gov/scitech/datait/databases/cwns/upload/cwns2008rtc.pdf> To address these challenges, EPA's Office of Water issued a National Combined Sewer Overflow Control Policy ("CSO Policy") on August 10, 1989 (54 Federal Register 37370).

Key Elements of the CSO Policy are:

- Provide clear levels of control that would be presumed to meet appropriate health and environmental objectives;
- Provide sufficient flexibility to municipalities, especially those that are financially disadvantaged, to consider the site-specific nature of CSOs and determine the most cost-effective means of reducing pollutants and meeting CWA objectives and requirements;
- Allow a phased approach for implementation of CSO controls which considers a community's financial capability; and
- Review and revise, as appropriate, Water Quality Standards (WQS) and their implementation procedures when developing long-term CSO control plans to reflect the site-specific wet weather impacts of CSOs.

The National Policy requires permittees to implement **Nine Minimum Controls (NMCs)**, and to develop and implement a **Long Term Control Plan (LTCP)**.

5. What are the "Nine Minimum Controls"?

The Nine Minimum Controls (NMC) are the technology based improvements required as part of the National and State CSO Policy. The Department's 2004 General CSO Permit required the NMCs, so these are not new strategies. However, since their implementation, the Department has determined that additional, enhanced controls are appropriate, and the newly issued, individual CSO permits require more detailed NMC implementation. Of particular note, the Department is requiring enhanced public notifications of CSO locations, health concerns and discharge events. Specifically:

The permittee will be required to post CSO Identification Signs (minimum 18" x 24") constructed out of reflective material at each of its CSO outfall locations providing its NJPDES Permit No., Discharge Serial No., phone numbers of the permittee and the NJDEP Hotline. The signs shall also contain a statement that there may be sewage overflows during and following wet weather with the possibility that contact with the water may cause illness. The permittee shall also employ measures such as the posting of leaflets/flyers/signs at affected use areas (i.e., beaches, marinas, docks, fishing piers, etc.), and/or notifying residents by either the US Postal Service or email describing what CSOs are, the locations of the CSO outfalls, and public health and safety information. The permittee shall also create and maintain a telephone hot line or website to provide immediate/up-to-date information regarding where CSO discharges may be occurring.

6. What is a Long Term Control Plan?

While the National CSO Policy required immediate implementation of the technology based Nine Minimum Controls, as the second phase of the CSO Policy, permittees are required to develop a Long Term Control Plan (LTCP). The LTCP is a system-wide evaluation of the sewage infrastructure, and the hydraulic relationship between the sewers, precipitation, treatment capacity and overflows. As part of the LTCP, the permittee must evaluate alternatives that will reduce/eliminate the discharges, and develop a plan and implementation schedule to do so. Once the implementation and plan is approved by the Department, the permittee must immediately begin progress toward reduction/elimination.

Of particular note, in NJ's CSO individual permits, the permittees will be required to submit the LTCP within 36 months of the effective date of the permit, and provide for implementation of the plan immediately following the Department's approval. Completion of the LTCP will provide that CSOs are minimized (or eliminated) such that water quality criteria are met at all times.

7. How can a CSO be eliminated or decreased?

The Draft NJ CSO permit requires the permittee to consider the following technologies when evaluating how to decrease or eliminate a CSO, under a LTCP:

- Green infrastructure
- Increased storage capacity in the collection system;
- STP expansion and/or storage at the plant
- Inflow/Infiltration reduction in the entire collection system that conveys flows to the treatment works to free up storage capacity or conveyance in the sewer system and/or treatment capacity at the STP.
- Sewer separation; and
- CSO discharge treatment.
- The National Policy also encourages municipalities to consider the use of a bypass of secondary treatment in the evaluation of alternatives.

8. What recent improvements have occurred in CSOs in New Jersey?

Under previous Department CSO permits, the Department required that all CSOs provide for the capture of "solids and floatables." Oftentimes, as the CSO discharge is a mixture of stormwater and wastewater, the discharge can contain items such as plastic bottles, leaves, tampon applicators, rags and other associated sewage and/or stormwater contaminants. Permittees were required to provide netting or bar screens at the point of discharge that will prevent the passage of any item through an

opening smaller than ½ inch. Currently, 88% of New Jersey's CSOs have solids/floatables installed. Of the remaining outfalls, solids/floatables will be required to be installed in accordance with enforcement schedules.